#8

SEQUENCE LISTING

<110> Kolterman, et al.
Amylin Pharmaceuticals, Inc.

<120> USE OF EXENDINS AND AGONISTS THEREOF FOR
MODULATION OF TRIGLYCERIDE LEVELS AND TREATMENT OF
DYSLIPIDEMIA

<130> 030639.0027.UTL(249/124)

<140> 09/756,690
<141> 2001-01-09

<150> 60/175,365
<151> 2000-01-10

<160> 190

<170> FastSEQ for Windows Version 4.0

<210> 1
<211> 39
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<213> Heloderma horridum

<220>
<223> Exendin-3

<220>
<221> AMIDATION
<222> 39
<223> Xaa stands for serine

<400> 1
His Ser Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
 1   5   10   15
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
            20   25   30
Ser Gly Ala Pro Pro Pro Xaa
         35

<210> 2
<211> 39
<212> PRT
<213> Heloderma suspectum

<220>
<223> Exendin-4

<220>
<221> AMIDATION

1

<222> 39 ·
<223> Xaa stands for serine

<400> 2
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
 1   5   10   15
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
            20   25   30
Ser Gly Ala Pro Pro Pro Xaa
         35

<210> 3
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<220>
<223> Exendin Agonist

<220>
<221> VARIANT
<222> (1)
<223> Xaa stands for His, Arg or Tyr

<220>
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<223> Xaa stands for Ser, Gly, Ala or Thr

<220>
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<220>
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<223> Xaa stands for Phe, Tyr or naphthylalanine

<220>
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<223> Xaa stands for Thr or Ser

<220>
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<223> Xaa stands for Ser or Thr

<220>
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<223> Xaa stands for Asp or Glu

<220>
<221> VARIANT

<222> (10)
<223> Xaa stands for Leu, Ile, Val, pentylglycine or Met

<220>
<221> VARIANT
<222> (14)
<223> Xaa stands for Leu, Ile, pentylglycine, Val or Met

<220>
<221> VARIANT
<222> (22)
<223> Xaa stands for Phe, Tyr or naphthylalanine

<220>
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<222> (23)
<223> Xaa stands for Ile, Val, Leu, pentylglycine, tert-butlyglycine or Met

<220>
<221> VARIANT
<222> (24)
<223> Xaa stands for Glu or Asp

<220>
<221> VARIANT
<222> (25)
<223> Xaa stands for Trp, Phe, Tyr, or naphthylalanine

<220>
<221> VARIANT
<222> (31, 36, 37 and 38)
<223> Xaa is independently Pro, homoproline, 3Hyp, 4Hyp, thioproline, N-alkylglycine, N-alkylpentylglycine, or N-alkylalanine

<220>
<221> UNSURE
<222> (39)
<223> Xaa stands for stands for Ser, Thr or Tyr, which is optionally amidated and with the proviso that the compound is not exendin-3 or exendin-4

<400> 3
Xaa Xaa Xaa Gly Thr Xaa Xaa Xaa Xaa Xaa Ser Lys Gln Xaa Glu Glu
 1   5   10   15
Glu Ala Val Arg Leu Xaa Xaa Xaa Xaa Leu Lys Asn Gly Gly Xaa Ser
            20   25   30
Ser Gly Ala Xaa Xaa Xaa Xaa
        35

<210> 4
<211> 28
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<220>
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<223> Xaa stands for His, Arg or Tyr

<220>
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<223> Xaa stands for Ser, Gly, Ala or Thr

<220>
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<223> Xaa stands for Ala or Thr

<220>
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<220>
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<220>
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<222> (11)
<223> Xaa stands for Ala or Ser
<220>
<221> VARIANT
<222> (12)
<223> Xaa stands for Ala or Lys
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4

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<220>
<221> VARIANT
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<223> Xaa stands for Ala or Gln


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<223> Xaa stands for Ala or Glu


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<223> Xaa stands for Ala or Arg


<220>
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<223> Xaa stands for Ala or Leu


<220>
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<223> Xaa stands for Ala, Phe, Tyr or naphthylalanine


<220>
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<223> Xaa stands for Ile, Val, Leu, pentylglycine, tert-butylglycine or Met



<220>
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<223> Xaa stands for Ala, Glu or Asp
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<220>
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<223> Xaa stands for Ala, Trp, Phe, Tyr or naphthylalanine

<220>
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<222> (26)
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<220>
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<223> Xaa stands for Ala or Lys

<220>
<221> VARIANT
<222> (28)
<223> Xaa stands for Ala or Asn, which is optionally amidated

<400> 4
Xaa Xaa Xaa Gly Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
 1               5                   10                  15
Xaa Ala Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
            20                  25




<210> 5
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<220>
<223> Exendin Agonist

<220>
<221> VARIANT
<222> (1)
<223> Xaa stands for His, Arg, Tyr, Ala, Norval, Val or Norleu

<220>
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<222> (2)
<223> Xaa stands for Ser, Gly Ala or Thr

<220>
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<222> (3)
<223> Xaa stands for Ala, Asp or Glu

<220>
<221> VARIANT
<222> (4)
<223> Xaa stands for Ala Norval, Val, Norleu or Gly
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<220>
<221> VARIANT
<222> (5)
<223> Xaa stands for Ala or Thr

<220>
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<223> Xaa stands for Phe, Tyr or naphthylalanine

<220>
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<223> Xaa stands for Thr or Ser

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<223> Xaa stands for Ala, Ser or Thr

<220>
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<223> Xaa stands for Ala, Norval, Val, Norleu, Asp or Glu

<220>
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<222> (13)
<223> Xaa stands for Ala or Gln

<220>
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<223> Xaa stands for Ala, Leu, Ile, pentylglycine, Val or Met

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<220>
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<220>
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<220>
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<223> Xaa stands for Phe, Tyr or naphthylalanine


<220>
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<223> Xaa stands for Ile, Val, Leu, pentylglycine, tert-butylglycine or Met

<220>
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<222> (28)
<223> Xaa stands for Ala or Asn, which is optionally amidated

<400> 5
Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
 1   5   10   15
Xaa Ala Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
            20   25

<210> 6
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<213> Artificial Sequence

<220>
<223> Exendin Agonist

<400> 6
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
 1   5   10   15
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly
            20   25   30

<210> 7
<211> 30
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<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (30)
<223> Xaa stands for Glycine

<400> 7
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
 1   5   10   15
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Xaa
            20   25   30

<210> 8
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<212> PRT
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<220>
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<220>
<221> AMIDATION
<222> (28)

<223> Xaa stands for Asparagine

<400> 8
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
 1   5   10   15
Glu Ala Val Arg Leu Ala Ile Glu Phe Leu Lys Xaa
            20   25

<210> 9
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<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (39)
<223> Xaa stands for Serine

<400> 9
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
 1   5   10   15
Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Gly Gly Pro Ser
            20   25   30
Ser Gly Ala Pro Pro Pro Xaa
        35

<210> 10
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<220>
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<220>
<221> AMIDATION
<222> (39)
<223> Xaa stands for Serine

<400> 10
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
 1   5   10   15
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
            20   25   30
Ser Gly Ala Pro Pro Pro Xaa
        35

<210> 11
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<210> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (39)
<223> Xaa stands for Serine

<400> 11
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
1   5   10   15
Glu Ala Val Arg Phe Ile Glu Phe Leu Lys Asn Gly Gly Pro Ser Ser
            20   25   30
Gly Ala Pro Pro Pro Xaa
        35

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<220>
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<220>
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<222> (39)
<223> Xaa stands for Serine

<400> 12
Tyr Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
1   5   10   15
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
            20   25   30
Ser Gly Ala Pro Pro Pro Xaa
        35

<210> 13
<211> 39
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<220>
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<220>
<221> AMIDATION
<222> (39)
<223> Xaa stands for Tyrosine

<400> 13
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
1   5   10   15

11

```
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
            20                  25                  30
Ser Gly Ala Pro Pro Pro Xaa
          35


<210> 14
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<212> PRT
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<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (39)
<223> Xaa stands for Serine


<400> 14
His Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
  1               5                  10                  15
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
            20                  25                  30
Ser Gly Ala Pro Pro Pro Xaa
          35


<210> 15
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<212> PRT
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<220>
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<220>
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<222> (6)
<223> Xaa stands for naph

<220>
<221> AMIDATION
<222> (39)
<223> Xaa stands for Serine

<400> 15
His Gly Glu Gly Thr Xaa Thr Ser Asp Leu Ser Asp Leu Ser Lys Gln
  1               5                  10                  15
Met Glu Glu Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly
            20                  25                  30
Gly Pro Ser Ser Gly Ala Pro Pro Pro Xaa
          35                  40
<210> 16
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<210> Artificial Sequence

<220>
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<220>
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<222> (39)
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<400> 16
His Gly Glu Gly Thr Phe Ser Ser Asp Leu Ser Lys Gln Met Glu Glu
  1   5   10   15
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
            20   25   30
Ser Gly Ala Pro Pro Pro Xaa
        35

<210> 17
<211> 39
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<220>
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<220>
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<222> (39)
<223> Xaa stands for Serine

<400> 17
His Gly Glu Gly Thr Phe Ser Thr Asp Leu Ser Lys Gln Met Glu Glu
  1   5   10   15
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
            20   25   30
Ser Gly Ala Pro Pro Pro Xaa
        35

<210> 18
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<220>
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<220>
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<222> (39)
<223> Xaa stands for Serine

<400> 18

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His Gly Glu Gly Thr Phe Thr Thr Asp Leu Ser Lys Gln Met Glu Glu
 1               5                    10                   15
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
            20                   25                   30
Ser Gly Ala Pro Pro Pro Xaa
         35
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<210> 19
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<220>
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<220>
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<222> (39)
<223> Xaa stands for Serine

<400> 19
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His Gly Glu Gly Thr Phe Thr Ser Glu Leu Ser Lys Gln Met Glu Glu
 1               5                    10                   15
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
            20                   25                   30
Ser Gly Ala Pro Pro Pro Xaa
         35
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<220>
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<220>
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<222> (10)
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<220>
<221> AMIDATION
<222> (39)
<223> Xaa stands for Serine
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```
<400> 20
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His Gly Glu Gly Thr Phe Thr Ser Asp Xaa Ser Lys Gln Met Glu Glu
 1               5                    10                   15
```

```
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
            20                  25                  30
Ser Gly Ala Pro Pro Pro Xaa
            35


<210> 21
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<220>
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<223> Xaa stands for pGly

<220>
<221> AMIDATION
<222> (39)
<223> Xaa stands for Serine

<400> 21
His Gly Glu Gly Thr Phe Thr Ser Asp Xaa Ser Lys Gln Leu Glu Glu
 1               5                  10                  15
Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Gly Gly Pro Ser
            20                  25                  30
Ser Gly Ala Pro Pro Pro Xaa
            35


<210> 22
<211> 39
<212> PRT
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<220>
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<220>
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<222> (14)
<223> Xaa stands for pGly

<220>
<221> AMIDATION
<222> (39)
<223> Xaa stands for Serine



<400> 22
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Xaa Glu Glu
 1               5                  10                  15
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Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
            20   25   30
Ser Gly Ala Pro Pro Pro Xaa
            35

<210> 23
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<220>
<221> VARIANT
<222> (14)
<223> Xaa stands for pGly

<220>
<221> AMIDATION
<222> (39)
<223> Xaa stands for Serine

<400> 23
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Xaa Glu Glu
 1   5   10   15
Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Gly Gly Pro Ser
            20   25   30
Ser Gly Ala Pro Pro Pro Xaa
            35

<210> 24
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<220>
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<220>
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<222> (22)
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<220>
<221> AMIDATION
<222> (39)
<223> Xaa stands for Serine

<400> 24
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
 1   5   10   15

16

```
Glu Ala Val Arg Leu Xaa Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
            20                  25                  30
Ser Gly Ala Pro Pro Pro Xaa
        35
```

<210> 25
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<220>
<223> Exendin Agonist

<220>
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<222> (39)
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<400> 25
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His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
 1               5                  10                  15
Glu Ala Val Arg Leu Phe Val Glu Trp Leu Lys Asn Gly Gly Pro Ser
            20                  25                  30
Ser Gly Ala Pro Pro Pro Xaa
        35
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<210> 26
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<220>
<223> Exendin Agonist

<220>
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<222> (39)
<223> Xaa stands for Serine

<400> 26
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His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
 1               5                  10                  15
Glu Ala Val Arg Leu Phe Val Glu Phe Leu Lys Asn Gly Gly Pro Ser
            20                  25                  30
Ser Gly Ala Pro Pro Pro Xaa
        35
```

<210> 27
<211> 39
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<222> (23)
<223> Xaa stands for tBuG

<220>
<221> AMIDATION
<222> (39)
<223> Xaa stands for Serine

<400> 27
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
1   5   10   15
Glu Ala Val Arg Leu Phe Xaa Glu Trp Leu Lys Asn Gly Gly Pro Ser
            20   25   30
Ser Gly Ala Pro Pro Pro Xaa
        35

<210> 28
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<220>
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<222> (23)
<223> Xaa stands for tBuG

<220>
<221> AMIDATION
<222> (39)
<223> Xaa stands for Serine

<400> 28
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
1   5   10   15
Glu Ala Val Arg Leu Phe Xaa Glu Phe Leu Lys Asn Gly Gly Pro Ser
            20   25   30
Ser Gly Ala Pro Pro Pro Xaa
        35

<210> 29
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<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (39)
<223> Xaa stands for Serine

<400> 29
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
 1   5   10   15
Glu Ala Val Arg Leu Phe Ile Asp Trp Leu Lys Asn Gly Gly Pro Ser
            20   25   30
Ser Gly Ala Pro Pro Pro Xaa
            35

<210> 30
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<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (39)
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<400> 30
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
 1   5   10   15
Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Gly Gly Pro Ser
            20   25   30
Ser Gly Ala Pro Pro Pro Xaa
            35

<210> 31
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<220>
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<220>
<221> AMIDATION
<222> (39)
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<400> 31
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
 1   5   10   15

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Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Xaa Ser
            20                  25                  30
Ser Gly Ala Xaa Xaa Xaa Xaa
            35
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<210> 32
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<222> (36,37 and 38)
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<223> Xaa stands for Serine

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<400> 32
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
  1               5                  10                  15
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
            20                  25                  30
Ser Gly Ala Xaa Xaa Xaa Xaa
            35
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<210> 33
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<220>
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<222> (31, 36, 37 and 38)
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<220>
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<223> Xaa stands for Serine

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<400> 33
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
  1               5                  10                  15
```

```
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Xaa Ser
            20                  25                  30
Ser Gly Ala Xaa Xaa Xaa Xaa
            35
```


<210> 34
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> VARIANT
<222> (36,37 and 38)
<223> Xaa stands for hPro

<220>
<221> AMIDATION
<222> (39)
<223> Xaa stands for Serine

<400> 34
```
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
 1               5                  10                  15
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
            20                  25                  30
Ser Gly Ala Xaa Xaa Xaa Xaa
            35
```


<210> 35
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> VARIANT
<222> (31, 36, 37 and 38)
<223> Xaa stands for tPro

<220>
<221> AMIDATION
<222> (39)
<223> Xaa stands for Serine

<400> 35
```
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
 1               5                  10                  15
```

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Gly Gly Xaa Ser
        20   25   30
Ser Gly Ala Xaa Xaa Xaa Xaa
        35

<210> 36
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> VARIANT
<222> (31, 36, 37 and 38)
<223> Xaa stands for hPro

<220>
<221> AMIDATION
<222> (39)
<223> Xaa stands for Serine

<400> 36
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
 1   5   10   15
Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Gly Gly Xaa Ser
        20   25   30
Ser Gly Ala Xaa Xaa Xaa Xaa
        35

<210> 37
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> VARIANT
<222> (31, 36, 37 and 38)
<223> Xaa stands for MeAla

<220>
<221> AMIDATION
<222> (39)
<223> Xaa stands for Serine

<400> 37
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
 1   5   10   15

22

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Xaa Ser
        20   25   30
Ser Gly Ala Xaa Xaa Xaa Xaa
        35

<210> 38
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> VARIANT
<222> (36, 37 and 38)
<223> Xaa stands for MeAla

<220>
<221> AMIDATION
<222> (39)
<223> Xaa stands for Serine

<400> 38
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
 1   5   10   15
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
        20   25   30
Ser Gly Ala Xaa Xaa Xaa Xaa
        35

<210> 39
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> VARIANT
<222> (31, 36, 37 and 38)
<223> Xaa stands for MeAla

<220>
<221> AMIDATION
<222> (39)
<223> Xaa stands for Serine

<400> 39
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
 1   5   10   15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Gly Gly Xaa Ser
            20   25   30
Ser Gly Ala Xaa Xaa Xaa Xaa
         35

<210> 40
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (28)
<223> Xaa stands for Asparagine

<400> 40
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
 1   5   10   15
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Xaa
            20   25

<210> 41
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (28)
<223> Xaa stands for Asparagine

<400> 41
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
 1   5   10   15
Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Xaa
            20   25

<210> 42
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (28)

<223> Xaa stands for Asparagine

<400> 42
His Ala Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
1   5   10   15
Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Xaa
            20   25

<210> 43
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (28)
<223> Xaa stands for Asparagine

<400> 43
His Gly Glu Gly Ala Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
1   5   10   15
Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Xaa
            20   25

<210> 44
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (28)
<223> Xaa stands for Asparagine

<400> 44
His Gly Glu Gly Thr Ala Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
1   5   10   15
Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Xaa
            20   25

<210> 45
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

```
<220>
<221> AMIDATION
<222> (28)
<223> Xaa stands for Asparagine

<400> 45
His Gly Glu Gly Thr Phe Thr Ala Asp Leu Ser Lys Gln Leu Glu Glu
 1               5                   10                  15
Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Xaa
            20                  25


<210> 46
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (28)
<223> Xaa stands for Asparagine

<400> 46
His Gly Glu Gly Thr Phe Thr Ser Asp Ala Ser Lys Gln Leu Glu Glu
 1               5                   10                  15
Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Xaa
            20                  25


<210> 47
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (28)
<223> Xaa stands for Asparagine

<400> 47
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ala Lys Gln Leu Glu Glu
 1               5                   10                  15
Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Xaa
            20                  25




<210> 48
<211> 28
```

```
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (28)
<223> Xaa stands for Asparagine

<400> 48
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Ala Gln Leu Glu Glu
 1               5                  10                  15
Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Xaa
            20                  25


<210> 49
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (28)
<223> Xaa stands for Asparagine

<400> 49
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Ala Leu Glu Glu
 1               5                  10                  15
Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Xaa
            20                  25


<210> 50
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (28)
<223> Xaa stands for Asparagine




<400> 50
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Ala Glu Glu
```

```
       1                5                        10                           15
Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Xaa
                  20                25


<210> 51
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (28)
<223> Xaa stands for Asparagine

<400> 51
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Ala Glu
 1                5                        10                           15
Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Xaa
                  20                25


<210> 52
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (28)
<223> Xaa stands for Asparagine

<400> 52
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Ala
 1                5                        10                           15
Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Xaa
                  20                25


<210> 53
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist


<220>
<221> AMIDATION
```

<222> (28)
<223> Xaa stands for Asparagine

<400> 53
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
 1   5   10   15
Ala Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Xaa
            20   25

<210> 54
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (28)
<223> Xaa stands for Asparagine

<400> 54
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
 1   5   10   15
Glu Ala Ala Arg Leu Phe Ile Glu Phe Leu Lys Xaa
            20   25

<210> 55
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (28)
<223> Xaa stands for Asparagine

<400> 55
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
 1   5   10   15
Glu Ala Val Ala Leu Phe Ile Glu Phe Leu Lys Xaa
            20   25

<210> 56
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (28)
<223> Xaa stands for Asparagine

<400> 56
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
1   5   10   15
Glu Ala Val Arg Ala Phe Ile Glu Phe Leu Lys Xaa
            20   25

<210> 57
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (28)
<223> Xaa stands for Asparagine

<400> 57
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
1   5   10   15
Glu Ala Val Arg Leu Phe Ile Ala Phe Leu Lys Xaa
            20   25

<210> 58
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (28)
<223> Xaa stands for Asparagine

<400> 58
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
1   5   10   15
Glu Ala Val Arg Leu Phe Ile Glu Ala Leu Lys Xaa
            20   25

<210> 59
<211> 28

<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (28)
<223> Xaa stands for Asparagine

<400> 59
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
 1   5   10   15
Glu Ala Val Arg Leu Phe Ile Glu Phe Ala Lys Xaa
            20   25

<210> 60
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (28)
<223> Xaa stands for Asparagine

<400> 60
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
 1   5   10   15
Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Ala Xaa
            20   25

<210> 61
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (28)
<223> Xaa stands for Alanine

<400> 61
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu

```
   1                 5                       10                          15
Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Xaa
                20                      25
```

<210> 62
<211> 38
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (38)
<223> Xaa stands for Proline

<400> 62

```
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
 1               5                       10                      15
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
                20                      25                      30
Ser Gly Ala Pro Pro Xaa
            35
```

<210> 63
<211> 38
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (38)
<223> Xaa stands for Proline

<400> 63

```
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
 1               5                       10                      15
Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Gly Gly Pro Ser
                20                      25                      30
Ser Gly Ala Pro Pro Xaa
            35
```

<210> 64
<211> 37
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

```
<220>
<221> AMIDATION
<222> (37)
<223> Xaa stands for Proline

<400> 64
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
 1               5                   10                  15
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
            20                  25                  30
Ser Gly Ala Pro Xaa
            35


<210> 65
<211> 37
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (37)
<223> Xaa stands for Proline

<400> 65
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
 1               5                   10                  15
Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Gly Gly Pro Ser
            20                  25                  30
Ser Gly Ala Pro Xaa
            35


<210> 66
<211> 36
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (36)
<223> Xaa stands for Proline




<400> 66
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
```

```
             1                     5                          10                        15
            Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
                        20                     25                     30
            Ser Gly Ala Xaa
                        35


<210> 67
<211> 36
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (36)
<223> Xaa stands for Proline

<400> 67
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
 1                     5                          10                        15
Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Gly Gly Pro Ser
            20                     25                     30
Ser Gly Ala Xaa
            35


<210> 68
<211> 35
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (35)
<223> Xaa stands for Alanine

<400> 68
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
 1                     5                          10                        15
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
            20                     25                     30
Ser Gly Xaa
            35


<210> 69
<211> 35
<212> PRT
<213> Artificial Sequence

<220>
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<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (35)
<223> Xaa stands for Alanine

<400> 69
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
 1   5   10   15
Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Gly Gly Pro Ser
            20   25   30
Ser Gly Xaa
        35

<210> 70
<211> 34
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (34)
<223> Xaa stands for Glycine

<400> 70
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
 1   5   10   15
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
            20   25   30
Ser Xaa

<210> 71
<211> 34
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (34)
<223> Xaa stands for Glycine

<400> 71
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu

```
 1               5                    10                   15
Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Gly Gly Pro Ser
          20                   25                   30
Ser Xaa


<210> 72
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (33)
<223> Xaa stands for Serine

<400> 72
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
 1               5                    10                   15
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
          20                   25                   30
Xaa


<210> 73
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (33)
<223> Xaa stands for Serine

<400> 73
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
 1               5                    10                   15
Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Gly Gly Pro Ser
          20                   25                   30
Xaa


<210> 74
<211> 32
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
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<221> AMIDATION
<222> (32)
<223> Xaa stands for Serine

<400> 74
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
1   5   10   15
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Xaa
            20   25   30

<210> 75
<211> 32
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (32)
<223> Xaa stands for Serine

<400> 75
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
1   5   10   15
Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Gly Gly Pro Xaa
            20   25   30

<210> 76
<211> 31
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (31)
<223> Xaa stands for Proline

<400> 76
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
1   5   10   15
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Xaa
            20   25   30

<210> 77
<211> 31
<212> PRT
<213> Artificial Sequence

<220>

37

<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (31)
<223> Xaa stands for Proline

<400> 77
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
 1   5   10   15
Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Gly Gly Xaa
             20   25   30

<210> 78
<211> 30
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist
<220>
<221> AMIDATION
<222> (30)
<223> Xaa stands for Glycine

<400> 78
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
 1   ·   5   10   15
Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Gly Xaa
             20   25   30

<210> 79
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (29)
<223> Xaa stands for Glycine

<400> 79
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
 1   5   10   15
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Xaa
             20   25

<210> 80
<211> 29

```
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (29)
<223> Xaa stands for Glycine

<400> 80
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
1               5                   10                  15
Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Xaa
            20                  25


<210> 81
<211> 38
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> VARIANT
<222> (31, 36 & 37)
<223> Xaa stands for tPro

<220>
<221> AMIDATION
<222> (38)
<223> Xaa stands for tPro

<400> 81
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
1               5                   10                  15
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Xaa Ser
            20                  25                  30
Ser Gly Ala Xaa Xaa Xaa
            35


<210> 82
<211> 38
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> VARIANT
<222> (36 & 37)
<223> Xaa stands for tPro
```

```
<220>
<221> AMIDATION
<222> (38)
<223> Xaa stands for tPro


<400> 82
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
 1               5                  10                  15
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
            20                  25                  30
Ser Gly Ala Xaa Xaa Xaa
         35



<210> 83
<211> 37
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> VARIANT
<222> (31)
<223> Xaa stands for NMeala

<220>
<221> AMIDATION
<222> (37)
<223> Xaa stands for Proline


<400> 83
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
 1               5                  10                  15
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Xaa Ser
            20                  25                  30
Ser Gly Ala Pro Xaa
         35



<210> 84
<211> 37
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> VARIANT
<222> (31 & 36)
<223> Xaa stands for NMeala

<220>
<221> AMIDATION
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```
<222> (37)
<223> Xaa stands for NMeala

<400> 84
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
 1               5                   10                  15
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Xaa Ser
                20                  25                  30
Ser Gly Ala Xaa Xaa
            35


<210> 85
<211> 37
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> VARIANT
<222> (31 & 36)
<223> Xaa stands for hPro

<220>
<221> AMIDATION
<222> (37)
<223> Xaa stands for hPro

<400> 85
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
 1               5                   10                  15
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Xaa Ser
                20                  25                  30
Ser Gly Ala Xaa Xaa
            35


<210> 86
<211> 36
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> VARIANT
<222> (31)
<223> Xaa stands for hPro


<220>
<221> AMIDATION
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41

<222> (36)
<223> Xaa stands for hPro

<400> 86
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
1   5   10   15
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Xaa Ser
                20   25   30
Ser Gly Ala Xaa
        35

<210> 87
<211> 35
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (35)
<223> Xaa stands for Alanine

<400> 87
Arg Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
1   5   10   15
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
                20   25   30
Ser Gly Xaa
        35

<210> 88
<211> 30
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (30)
<223> Xaa stands for Glycine

<400> 88
His Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
1   5   10   15
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Xaa
                20   25   30

<210> 89
<211> 28

42

<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> VARIANT
<222> (6)
<223> Xaa stands for Naphthylala

<220>
<221> AMIDATION
<222> (28)
<223> Xaa stands for Asparagine

<400> 89
His Gly Glu Gly Thr Xaa Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
1   5   10   15
Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Xaa
            20   25

<210> 90
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (28)
<223> Xaa stands for Asparagine

<400> 90
His Gly Glu Gly Thr Phe Ser Ser Asp Leu Ser Lys Gln Met Glu Glu
1   5   10   15
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Xaa
            20   25

<210> 91
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (28)
<223> Xaa stands for Asparagine

<400> 91

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His Gly Glu Gly Thr Phe Ser Thr Asp Leu Ser Lys Gln Met Glu Glu
 1               5                   10                  15
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Xaa
            20                  25


<210> 92
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (28)
<223> Xaa stands for Asparagine

<400> 92
His Gly Glu Gly Thr Phe Thr Ser Glu Leu Ser Lys Gln Met Ala Glu
 1               5                   10                  15
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Xaa
            20                  25


<210> 93
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> VARIANT
<222> (10)
<223> Xaa stands for pentygly

<220>
<221> AMIDATION
<222> (28)
<223> Xaa stands for Asparagine

<400> 93
His Gly Glu Gly Thr Phe Thr Ser Asp Xaa Ser Lys Gln Leu Glu Glu
 1               5                   10                  15
Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Xaa
            20                  25


<210> 94
<211> 28
<212> PRT
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<210> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> VARIANT
<222> (22)
<223> Xaa stands for Naphthylala

<220>
<221> AMIDATION
<222> (28)
<223> Xaa stands for Asparagine

<400> 94
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
 1   5   10   15
Glu Ala Val Arg Leu Xaa Ile Glu Phe Leu Lys Xaa
            20   25

<210> 95
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> VARIANT
<222> (23)
<223> Xaa stands for tButylgly

<220>
<221> AMIDATION
<222> (28)
<223> Xaa stands for Asparagine

<400> 95
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
 1   5   10   15
Glu Ala Val Arg Leu Phe Xaa Glu Trp Leu Lys Xaa
            20   25

<210> 96
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist
<220>
<221> AMIDATION
<222> (28)

45

<223> Xaa stands for Asparagine

<400> 96
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
 1   5   10   15
Glu Ala Val Arg Leu Phe Ile Asp Phe Leu Lys Xaa
            20   25

<210> 97
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (33)
<223> Xaa stands for Serine

<400> 97
His Gly Glu Gly Thr Phe Thr Ser Asp Ala Ser Lys Gln Leu Glu Glu
 1   5   10   15
Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Gly Gly Pro Ser
            20   25   30
Xaa

<210> 98
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (29)
<223> Xaa stands for Glycine

<400> 98
His Gly Glu Gly Thr Phe Thr Ser Asp Ala Ser Lys Gln Met Glu Glu
 1   5   10   15
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Xaa
            20   25

<210> 99
<211> 37
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> VARIANT
<222> (31 & 36)
<223> Xaa stands for hPro

<220>
<221> AMIDATION
<222> (37)
<223> Xaa stands for hPro

<400> 99
His Gly Glu Gly Thr Phe Thr Ser Asp Ala Ser Lys Gln Met Glu Glu
1   5   10   15
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Xaa Ser
            20   25   30
Ser Gly Ala Xaa Xaa
        35

<210> 100
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist
<220>
<221> AMIDATION
<222> (28)
<223> Xaa stands for Asparagine

<400> 100
Ala Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
1   5   10   15
Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Xaa
            20   25

<210> 101
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (28)
<223> Xaa stands for Asparagine

<400> 101
His Gly Ala Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
1   5   10   15

```
Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Xaa
            20                  25


<210> 102
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (28)
<223> Xaa stands for Asparagine

<400> 102
His Gly Glu Ala Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
 1               5                   10                  15
Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Xaa
            20                  25


<210> 103
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (28)
<223> Xaa stands for Asparagine

<400> 103
His Gly Glu Gly Thr Phe Thr Ser Ala Leu Ser Lys Gln Leu Glu Glu
 1               5                   10                  15
Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Xaa
            20                  25


<210> 104
<211> 28
<212> PRT
<213> Artificial Sequence


<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (28)
<223> Xaa stands for Asparagine
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<400> 104
Ala Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
1   5   10   15
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Xaa
            20   25

<210> 105
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (28)
<223> Xaa stands for Asparagine

<400> 105
His Gly Ala Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
1   5   10   15
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Xaa
            20   25

<210> 106
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (28)
<223> Xaa stands for Asparagine

<400> 106
His Gly Glu Ala Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
1   5   10   15
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Xaa
            20   25

<210> 107
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

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<220>
<221> AMIDATION
<222> (28)
<223> Xaa stands for Asparagine

<400> 107
His Gly Glu Gly Thr Phe Thr Ser Ala Leu Ser Lys Gln Met Glu Glu
1                   5                   10                  15
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Xaa
            20                  25


<210> 108
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (28)
<223> Xaa stands for Asparagine

<400> 108
His Gly Glu Gly Thr Phe Thr Ser Asp Ala Ser Lys Gln Met Glu Glu
1                   5                   10                  15
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Xaa
            20                  25


<210> 109
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (28)
<223> Xaa stands for Asparagine




<400> 109
Ala Ala Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
1                   5                   10                  15
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Xaa
            20                  25
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<210> 110
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (28)
<223> Xaa stands for Asparagine

<400> 110
Ala Ala Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
 1   5   10   15
Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Xaa
             20   25

<210> 111
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (28)
<223> Xaa stands for Asparagine

<400> 111
Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
 1   5   10   15
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Xaa
             20   25

<210> 112
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (28)
<223> Xaa stands for Asparagine

<400> 112
Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu

```
 1                    5                    10                   15
Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Xaa
              20                    25
```

<210> 113
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (28)
<223> Xaa stands for Asparagine

<400> 113
```
Ala Gly Asp Gly Ala Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
 1                    5                    10                   15
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Xaa
              20                    25
```

<210> 114
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (28)
<223> Xaa stands for Asparagine

<400> 114
```
Ala Gly Asp Gly Ala Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
 1                    5                    10                   15
Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Xaa
              20                    25
```

<210> 115
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> VARIANT
<222> (6)
<223> Xaa stands for NaphthylAla

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<220>
<221> AMIDATION
<222> (28)
<223> Xaa stands for Asparagine

<400> 115
Ala Gly Asp Gly Thr Xaa Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
 1               5                  10                  15
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Xaa
            20                  25


<210> 116
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> VARIANT
<222> (6)
<223> Xaa stands for Naphthylala

<220>
<221> AMIDATION
<222> (28)
<223> Xaa stands for Asparagine

<400> 116
Ala Gly Asp Gly Thr Xaa Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
 1               5                  10                  15
Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Xaa
            20                  25


<210> 117
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (28)
<223> Xaa stands for Asparagine

<400> 117
Ala Gly Asp Gly Thr Phe Ser Ser Asp Leu Ser Lys Gln Met Glu Glu
 1               5                  10                  15
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Xaa
            20                  25
```

<210> 118
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (28)
<223> Xaa stands for Asparagine

<400> 118
Ala Gly Asp Gly Thr Phe Ser Ser Asp Leu Ser Lys Gln Leu Glu Glu
 1   5   10   15
Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Xaa
            20   25

<210> 119
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (28)
<223> Xaa stands for Asparagine

<400> 119
Ala Gly Asp Gly Thr Phe Thr Ala Asp Leu Ser Lys Gln Met Glu Glu
 1   5   10   15
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Xaa
            20   25

<210> 120
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (28)
<223> Xaa stands for Asparagine

<400> 120
Ala Gly Asp Gly Thr Phe Thr Ala Asp Leu Ser Lys Gln Leu Glu Glu

```
     1                 5                      10                      15
Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Xaa
                20                      25


<210> 121
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (28)
<223> Xaa stands for Asparagine

<400> 121
Ala Gly Asp Gly Thr Phe Thr Ser Ala Leu Ser Lys Gln Met Glu Glu
 1               5                      10                      15
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Xaa
                20                      25


<210> 122
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (28)
<223> Xaa stands for Asparagine

<400> 122
Ala Gly Asp Gly Thr Phe Thr Ser Ala Leu Ser Lys Gln Leu Glu Glu
 1               5                      10                      15
Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Xaa
                20                      25


<210> 123
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (28)
<223> Xaa stands for Asparagine
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```
<400> 123
Ala Gly Asp Gly Thr Phe Thr Ser Glu Leu Ser Lys Gln Met Glu Glu
 1               5                   10                  15
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Xaa
            20                  25


<210> 124
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (28)
<223> Xaa stands for Asparagine

<400> 124
Ala Gly Asp Gly Thr Phe Thr Ser Glu Leu Ser Lys Gln Leu Glu Glu
 1               5                   10                  15
Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Xaa
            20                  25


<210> 125
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (28)
<223> Xaa stands for Asparagine

<400> 125
Ala Gly Asp Gly Thr Phe Thr Ser Asp Ala Ser Lys Gln Met Glu Glu
 1               5                   10                  15
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Xaa
            20                  25


<210> 126
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist
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<220>
<221> AMIDATION
<222> (28)
<223> Xaa stands for Asparagine

<400> 126
Ala Gly Asp Gly Thr Phe Thr Ser Asp Ala Ser Lys Gln Leu Glu Glu
 1   5   10   15
Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Xaa
            20   25

<210> 127
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> VARIANT
<222> (10)
<223> Xaa stands for Pentylgly

<220>
<221> AMIDATION
<222> (28)
<223> Xaa stands for Asparagine

<400> 127
Ala Gly Asp Gly Thr Phe Thr Ser Asp Xaa Ser Lys Gln Met Glu Glu
 1   5   10   15
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Xaa
            20   25

<210> 128
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> VARIANT
<222> (10)
<223> Xaa stands for Pentylgly

<220>
<221> AMIDATION
<222> (28)
<223> Xaa stands for Asparagine

<400> 128

```
Ala Gly Asp Gly Thr Phe Thr Ser Asp Xaa Ser Lys Gln Leu Glu Glu
 1               5                  10                  15
Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Xaa
            20                  25
```

<210> 129
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (28)
<223> Xaa stands for Asparagine

<400> 129
```
Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ala Lys Gln Met Glu Glu
 1               5                  10                  15
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Xaa
            20                  25
```

<210> 130
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (28)
<223> Xaa stands for Asparagine

<400> 130
```
Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ala Lys Gln Leu Glu Glu
 1               5                  10                  15
Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Xaa
            20                  25
```

<210> 131
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (28)

<223> Xaa stands for Asparagine

<400> 131
Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Ala Gln Met Glu Glu
 1   5   10   15
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Xaa
            20   25

<210> 132
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist
<220>
<221> AMIDATION
<222> (28)
<223> Xaa stands for Asparagine

<400> 132
Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Ala Gln Leu Glu Glu
 1   5   10   15
Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Xaa
            20   25

<210> 133
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (28)
<223> Xaa stands for Asparagine

<400> 133
Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Ala Met Glu Glu
 1   5   10   15
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Xaa
            20   25

<210> 134
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (28)
<223> Xaa stands for Asparagine

<400> 134
Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Ala Leu Glu Glu
 1   5   10   15
Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Xaa
            20   25

<210> 135
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (28)
<223> Xaa stands for Asparagine

<400> 135
Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Ala Glu Glu
 1   5   10   15
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Xaa
            20   25

<210> 136
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (28)
<223> Xaa stands for Asparagine

<400> 136
Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Ala Glu Glu
 1   5   10   15
Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Xaa
            20   25

<210> 137
<211> 28
<212> PRT

<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> VARIANT
<222> (14)
<223> Xaa stands for Pentylgly

<220>
<221> AMIDATION
<222> (28)
<223> Xaa stands for Asparagine

<400> 137
Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Xaa Glu Glu
 1   5   10   15
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Xaa
            20   25

<210> 138
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> VARIANT
<222> (14)
<223> Xaa stands for Pentylgly

<220>
<221> AMIDATION
<222> (28)
<223> Xaa stands for Asparagine

<400> 138
Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Xaa Glu Glu
 1   5   10   15
Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Xaa
            20   25

<210> 139
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> VARIANT

<220>
<222> 28
<223> Xaa stands for Asparagine

<400> 139
Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Ala Glu
 1   5   10   15
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Xaa
            20   25

<210> 140
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (28)
<223> Xaa stands for Asparagine

<400> 140
Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Ala Glu
 1   5   10   15
Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Xaa
            20   25

<210> 141
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (28)
<223> Xaa stands for Asparagine

<400> 141
Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Ala
 1   5   10   15
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Xaa
            20   25

<210> 142
<211> 28
<212> PRT

<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (28)
<223> Xaa stands for Asparagine

<400> 142
Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Ala
 1   5   10   15
Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Xaa
            20   25

<210> 143
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (28)
<223> Xaa stands for Asparagine

<400> 143
Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
 1   5   10   15
Ala Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Xaa
            20   25

<210> 144
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (28)
<223> Xaa stands for Asparagine

<400> 144
Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
 1   5   10   15

```
Ala Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Xaa
            20                      25


<210> 145
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (28)
<223> Xaa stands for Asparagine

<400> 145
Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
 1               5                   10                  15
Glu Ala Ala Arg Leu Phe Ile Glu Trp Leu Lys Xaa
            20                  25


<210> 146
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (28)
<223> Xaa stands for Asparagine

<400> 146
Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
 1               5                   10                  15
Glu Ala Ala Arg Leu Phe Ile Glu Phe Leu Lys Xaa
            20                  25


<210> 147
<211> 28
<212> PRT
<213> Artificial Sequence



<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (28)
```

<223> Xaa stands for Asparagine

<400> 147
Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
 1   5   10   15
Glu Ala Val Ala Leu Phe Ile Glu Trp Leu Lys Xaa
            20   25

<210> 148
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (28)
<223> Xaa stands for Asparagine

<400> 148
Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
 1   5   10   15
Glu Ala Val Ala Leu Phe Ile Glu Phe Leu Lys Xaa
            20   25

<210> 149
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (28)
<223> Xaa stands for Asparagine

<400> 149
Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
 1   5   10   15
Glu Ala Val Arg Ala Phe Ile Glu Trp Leu Lys Xaa
            20   25

<210> 150
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

```
<220>
<221> AMIDATION
<222> (28)
<223> Xaa stands for Asparagine

<400> 150
Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
 1               5                   10                  15
Glu Ala Val Arg Ala Phe Ile Glu Phe Leu Lys Xaa
            20                  25


<210> 151
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> VARIANT
<222> (22)
<223> Xaa stands for Naphthylala

<220>
<221> AMIDATION
<222> (28)
<223> Xaa stands for Asparagine

<400> 151
Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
 1               5                   10                  15
Glu Ala Val Arg Leu Xaa Ile Glu Trp Leu Lys Xaa
            20                  25


<210> 152
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> VARIANT
<222> (22)
<223> Xaa stands for Naphthylala


<220>
<221> AMIDATION
<222> (28)
```

<223> Xaa stands for Asparagine

<400> 152
Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
 1   5   10   15
Glu Ala Val Arg Leu Xaa Ile Glu Phe Leu Lys Xaa
            20   25

<210> 153
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (28)
<223> Xaa stands for Asparagine

<400> 153
Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
 1   5   10   15
Glu Ala Val Arg Leu Phe Val Glu Trp Leu Lys Xaa
            20   25

<210> 154
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (28)
<223> Xaa stands for Asparagine

<400> 154
Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
 1   5   10   15
Glu Ala Val Arg Leu Phe Val Glu Phe Leu Lys Xaa
            20   25

<210> 155
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist
<220>

```
<221> VARIANT
<222> (23)
<223> Xaa stands for tButylgly

<220>
<221> AMIDATION
<222> (28)
<223> Xaa stands for Asparagine

<400> 155
Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
 1               5                   10                  15
Glu Ala Val Arg Leu Phe Xaa Glu Trp Leu Lys Xaa
            20                  25


<210> 156
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> VARIANT
<222> (23)
<223> Xaa stands for tButylgly

<220>
<221> AMIDATION
<222> (28)
<223> Xaa stands for Asparagine

<400> 156
Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
 1               5                   10                  15
Glu Ala Val Arg Leu Phe Xaa Glu Phe Leu Lys Xaa
            20                  25


<210> 157
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (28)
<223> Xaa stands for Asparagine

<400> 157
Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
 1               5                   10                  15
```

```
Glu Ala Val Arg Leu Phe Ile Asp Trp Leu Lys Xaa
            20                  25
```

```
<210> 158
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (28)
<223> Xaa stands for Asparagine
```

```
<400> 158
Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
 1               5                   10                  15
Glu Ala Val Arg Leu Phe Ile Asp Phe Leu Lys Xaa
            20                  25
```

```
<210> 159
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (28)
<223> Xaa stands for Asparagine
```

```
<400> 159
Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
 1               5                   10                  15
Glu Ala Val Arg Leu Phe Ile Glu Ala Leu Lys Xaa
            20                  25
```

```
<210> 160
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist


<220>
<221> AMIDATION
<222> (28)
```

<223> Xaa stands for Asparagine

<400> 160
Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
1   5   10   15
Glu Ala Val Arg Leu Phe Ile Glu Ala Leu Lys Xaa
            20   25

<210> 161
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (28)
<223> Xaa stands for Asparagine

<400> 161
Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
1   5   10   15
Glu Ala Val Arg Leu Phe Ile Glu Trp Ala Lys Xaa
            20   25

<210> 162
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (28)
<223> Xaa stands for Asparagine

<400> 162
Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
1   5   10   15
Glu Ala Val Arg Leu Phe Ile Glu Phe Ala Lys Xaa
            20   25

<210> 163
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (28)
<223> Xaa stands for Asparagine

<400> 163
Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
 1   5   10   15
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Ala Xaa
            20   25

<210> 164
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (28)
<223> Xaa stands for Asparagine

<400> 164
Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
 1   5   10   15
Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Ala Xaa
            20   25

<210> 165
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (28)
<223> Xaa stands for Alanine

<400> 165
Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
 1   5   10   15
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Xaa
            20   25

<210> 166
<211> 28
<212> PRT

71

<220>
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (28)
<223> Xaa stands for Alanine

<400> 166
Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
 1   5   10   15
Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Xaa
            20   25

<210> 167
<211> 38
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (38)
<223> Xaa stands for Proline

<400> 167
Ala Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
 1   5   10   15
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
            20   25   30
Ser Gly Ala Pro Pro Xaa
        35

<210> 168
<211> 38
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (38)
<223> Xaa stands for Proline

<400> 168
His Gly Ala Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
 1   5   10   15

```
Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Gly Gly Pro Ser
            20                  25                      30
Ser Gly Ala Pro Pro Xaa
            35
```

<210> 169
<211> 37
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (37)
<223> Xaa stands for Proline

<400> 169
```
His Gly Glu Ala Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
 1               5                  10                  15
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
            20                  25                      30
Ser Gly Ala Pro Xaa
            35
```

<210> 170
<211> 36
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (36)
<223> Xaa stands for Proline

<400> 170
```
His Gly Glu Gly Thr Phe Thr Ser Ala Leu Ser Lys Gln Met Glu Glu
 1               5                  10                  15
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
            20                  25                      30
Ser Gly Ala Xaa
            35
```

<210> 171
<211> 36
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (36)
<223> Xaa stands for Proline

<400> 171
Ala Gly Glu Gly Thr Phe Thr Ser Asp Ala Ser Lys Gln Leu Glu Glu
 1   5   10   15
Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Gly Gly Pro Ser
            20   25   30
Ser Gly Ala Xaa
        35

<210> 172
<211> 35
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (35)
<223> Xaa stands for Alanine

<400> 172
Ala Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
 1   5   10   15
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
            20   25   30
Ser Gly Xaa
        35

<210> 173
<211> 35
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (35)
<223> Xaa stands for Alanine

<400> 173
His Gly Ala Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
 1   5   10   15

```
Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Gly Gly Pro Ser
            20                  25                  30
Ser Gly Xaa
         35


<210> 174
<211> 34
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (34)
<223> Xaa stands for Glycine

<400> 174
His Gly Glu Ala Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
 1               5                  10                  15
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
            20                  25                  30
Ser Xaa


<210> 175
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (33)
<223> Xaa stands for Serine

<400> 175
His Gly Glu Gly Thr Phe Thr Ser Ala Leu Ser Lys Gln Met Glu Glu
 1               5                  10                  15
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
            20                  25                  30
Xaa


<210> 176
<211> 32
<212> PRT
<213> Artificial Sequence


<220>
<223> Exendin Agonist
```

75

```
<220>
<221> AMIDATION
<222> (32)
<223> Xaa stands for Serine

<400> 176
Ala Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
1                   5                   10                  15
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Xaa
                20                  25                  30


<210> 177
<211> 32
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (32)
<223> Xaa stands for Serine

<400> 177
His Gly Ala Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
1                   5                   10                  15
Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Gly Gly Pro Xaa
                20                  25                  30


<210> 178
<211> 31
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (31)
<223> Xaa stands for Proline

<400> 178
His Gly Glu Ala Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
1                   5                   10                  15
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Xaa
                20                  25                  30



<210> 179
<211> 30
<212> PRT
```

<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (30)
<223> Xaa stands for Glycine

<400> 179
His Gly Glu Gly Thr Phe Thr Ser Ala Leu Ser Lys Gln Leu Glu Glu
 1   5   10   15
Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Gly Xaa
            20   25   30

<210> 180
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (29)
<223> Xaa stands for Glycine

<400> 180
Ala Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
 1   5   10   15
Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Xaa
            20   25

<210> 181
<211> 38
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> VARIANT
<222> (31, 36 and 37)
<223> Xaa stands for tPro

<220>
<221> AMIDATION
<222> (38)
<223> Xaa stands for tPro

<400> 181
His Gly Ala Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu

```
     1                   5                   10                  15
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Xaa Ser
                    20                  25                  30
Ser Gly Ala Xaa Xaa Xaa
            35
```

<210> 182
<211> 38
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> VARIANT
<222> (36 and 37)
<223> Xaa stands for tPro

<220>
<221> AMIDATION
<222> (38)
<223> Xaa stands for tPro

<400> 182
```
His Gly Glu Ala Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
     1                   5                   10                  15
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
                    20                  25                  30
Ser Gly Ala Xaa Xaa Xaa
            35
```

<210> 183
<211> 37
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> VARIANT
<222> (31 and 36)
<223> Xaa stands for NMeala

<220>
<221> AMIDATION
<222> (37)
<223> Xaa stands for NMeala

<400> 183
```
His Gly Glu Gly Thr Phe Thr Ser Ala Leu Ser Lys Gln Met Glu Glu
     1                   5                   10                  15
```

```
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Xaa Ser
            20                  25                  30
Ser Gly Ala Xaa Xaa
        35


<210> 184
<211> 36
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> VARIANT
<222> (31)
<223> Xaa stands for hPro

<220>
<221> AMIDATION
<222> (36)
<223> Xaa stands for hPro

<400> 184
Ala Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
 1               5                   10                  15
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Xaa Ser
            20                  25                  30
Ser Gly Ala Xaa
        35


<210> 185
<211> 35
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (35)
<223> Xaa stands for Alanine

<400> 185
His Gly Ala Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
 1               5                   10                  15
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
            20                  25                  30
Ser Gly Xaa
        35


<210> 186
<211> 30
<212> PRT
```

79

<220>
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (30)
<223> Xaa stands for Glycine

<400> 186
His Gly Asp Ala Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
 1   5   10   15
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Xaa
            20   25   30

<210> 187
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (39)
<223> Xaa stands for Serine

<400> 187
Ala Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
 1   5   10   15
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
            20   25   30
Ser Gly Ala Pro Pro Pro Xaa
        35

<210> 188
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin Agonist

<220>
<221> AMIDATION
<222> (39)
<223> Xaa stands for Serine

<400> 188
Ala Gly Ala Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
 1   5   10   15

```
Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Gly Gly Pro Ser
            20                      25                      30
Ser Gly Ala Pro Pro Pro Xaa
            35
```

<210> 189
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> artificial sequence with specific variable
      residues

<220>
<221> MOD_RES
<222> 1
<223> Amidation, Gly at position 1 is optionally
      amidated in the case that residues in positions
      2...10 are absent.

<220>
<221> MOD_RES
<222> 2
<223> Amidation, Gly at position 2 is is optional and
      optionally amidated in the case that residues in
      positions 3...10 are absent.

<220>
<221> UNSURE
<222> 3
<223> Xaa is selected from Pro, homoproline, 3Hyp, 4Hyp,
      thioproline, N-Alkylglycine, N-alkylpentylglycine,
      or N-alklalanine and is optionally amidated in the
      case that residues in positions 4...10 are absent

<220>
<221> MOD_RES
<222> 4
<223> Amidation, Ser at position 4 is optionally
      amidated in the case that residues in positions
      5...10 are absent

<220>
<221> MOD_RES
<222> 5
<223> Amidation, Ser at position 5 is optionally
      amidated in the case that residues in positions
      6...10 are absent

<220>
<221> MOD_RES
<222> 6
<223> Amidation, Gly at position 6 is optionally
      amidated in the case that residues in position
      7...10 are absent

```
<220>
<221> MOD_RES
<222> 7
<223> Amidation, Ala at position 7 is optionally
      amidated in the case that residues in positions
      8...10 are absent

<220>
<221> UNSURE
<222> 8
<223> Xaa is selected from Pro, homoproline, 3Hyp, 4Hyp,
      thioproline, N-alkylglycine, N-alkylpentylglycine,
      or N-alkylalanine and is optionally amidated in
      the case that residues in positions 9...10 are
      absent

<220>
<221> UNSURE
<222> 9
<223> Xaa is selected from Pro, homoproline, 3Hyp, 4Hyp,
      thioproline, N-alkylglycine, N-alkylpentylglycine,
      or N-alkylalanine and is optionally amidated in
      the case that residues in position 10 are absent

<220>
<221> UNSURE
<222> 10
<223> Xaa is selected from Pro, homoproline, 3Hyp, 4Hyp,
      thioproline, N-alkylglycine, N-alkylpentylglycine,
      or N-alkylalanine and is optionally amidated


<400> 189
Gly Gly Xaa Ser Ser Gly Ala Xaa Xaa Xaa
 1               5                   10


<210> 190
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> artificial sequence with specific variable
      residues

<220>
<221> MOD_RES
<222> 1
<223> Amidation, Gly at position 1 is optionally
      amidated in the case that residues in positions
      2...11 are absent.

<220>
<221> MOD_RES
<222> 2
```

<223> Amidation, Gly at position 2 is is optional and
        optionally amidated in the case that residues in
        positions 3...11 are absent.

<220>
<221> UNSURE
<222> 3
<223> Xaa is selected from Pro, homoproline, 3Hyp, 4Hyp,
        thioproline, N-Alkylglycine, N-alkylpentylglycine,
        or N-alklalanine and is optionally amidated in the
        case that residues in positions 4...11 are absent

<220>
<221> MOD_RES
<222> 4
<223> Amidation, Ser at position 4 is optionally
        amidated in the case that residues in positions
        5...11 are absent

<220>
<221> MOD_RES
<222> 5
<223> Amidation, Ser at position 5 is optionally
        amidated in the case that residues in positions
        6...11 are absent

<220>
<221> MOD_RES
<222> 6
<223> Amidation, Gly at position 6 is optionally
        amidated in the case that residues in position
        7...11 are absent

<220>
<221> MOD_RES
<222> 7
<223> Amidation, Ala at position 7 is optionally
        amidated in the case that residues in positions
        8...11 are absent

<220>
<221> UNSURE
<222> 8
<223> Xaa is selected from Pro, homoproline, 3Hyp, 4Hyp,
        thioproline, N-alkylglycine, N-alkylpentylglycine,
        or N-alkylalanine and is optionally amidated in
        the case that residues in positions 9...11 are
        absent

<220>
<221> UNSURE
<222> 9
<223> Xaa is selected from Pro, homoproline, 3Hyp, 4Hyp,
        thioproline, N-alkylglycine, N-alkylpentylglycine,
        or N-alkylalanine and is optionally amidated in
        the case that residues in position 10...11 are absent

<220>
<221> UNSURE
<222> 10
<223> Xaa is selected from Pro, homoproline, 3Hyp, 4Hyp,
thioproline, N-alkylglycine, N-alkylpentylglycine,
or N-alkylalanine and is optionally amidated in
the case that residues in position 11 are absent

<220>
<221> UNSURE
<222> 11
<223> Xaa is Ala, which is optionally amidated

<400> 190
Gly Gly Xaa Ser Ser Gly Ala Xaa Xaa Xaa Xaa
 1   5   10